



Eyes Wide Open: Embracing Uncertainty through Scenario Planning

Published : July 22, 2009 in Knowledge@Wharton

As protests in Iran last month drew the world's attention, the top executives at a large global industrial goods company held a teleconference to consider their options. The meeting was hastily called, but the participants were not starting from scratch. In fact, the events unfolding in the country were strikingly similar to a scenario that they had developed, along with a handful others, in a 2008 offsite meeting focused on potential changes in their competitive environment.

The workshop, the output, and the eventual impact on decision making represents a perfect illustration of how so-called scenario planning techniques can be utilized to help managers navigate in complex and uncertain environments. In the meeting the industrial company held last year, executives had discussed each scenario they developed, the potential triggers for each of them, and how the company should respond to each of these situations if it were to arise. Pulling out the notes from these discussions, they already knew their options and had a view on how they would like to respond. In many ways, they were prepared -- and already one step ahead of some other companies.



This is a single/personal use copy of Knowledge@Wharton. For multiple copies, custom reprints, e-prints, posters or plaques, please contact PARS International: reprints@parsiintl.com P. (212) 221-9595 x407.

Paul J. H. Schoemaker, research director of the Wharton School's [Mack Center for Technological Innovation](#), says such examples illustrate a continuing shift in how companies think about the future. He observes that when managers are facing the profound uncertainties increasingly seen today, they tend to adopt one of three strategic postures.

The first, Schoemaker says, is the "zero-future" option: Here, caution rules the day; no attempts are made to analyze, anticipate or predict anything beyond the short-term, and major decisions are put off until the fog lifts. The second choice is to bet strongly on one particular future. As Schoemaker describes it, the upside is that leaders are able to convey a clear message, reducing anxiety for stakeholders, and take bold action that may later be viewed as brilliant. The danger is that they could place the wrong bets or fall victim to wishful thinking.

The third option entails what Schoemaker describes as a deliberate attempt to separate what we do and do not know about the future, and to use that as a basis for exploring many possible futures -- in other words, developing scenarios rather than predictions. This approach differs from the first two primarily in that it is a much more open mindset, with a focus on agility and options. Yet it also is in many ways the most challenging to adopt. "It takes courage to admit our collective ignorance," Schoemaker says, "because it conflicts with our common notion of leadership, which prizes omniscience. However, our world is too complex for the heroic leadership of the past where a great leader rides up on a white horse and points the way to the future. A better approach now is to embrace uncertainty and examine it in detail to discover where the hidden opportunities lurk."

Creating Options

Trying to gain a better understanding of the trends shaping the competitive environment has always been critical for managers. In the 1970s, scenario thinking first became relatively popular as a structured way to look ahead -- to understand new growth areas, anticipate risks, spot opportunities and build a long-term vision. Perhaps most notably, Royal Dutch Shell used the approach to look more broadly at the trends and developments that could impact the price of oil and develop stories that could challenge management perceptions. Since then, however, companies of all sizes and in many industries have picked up the practice, particularly at times of crisis or dramatic change.

[George S. Day](#), a professor of marketing at Wharton and co-director of the Mack Center, also has witnessed the recent rise in scenario thinking firsthand. "What has changed to make scenario planning so timely? Obviously uncertainty is way up. This is the main driver, because when conditions are stable it's easier to live with momentum and the projections we normally use," he points out. "The challenge is that when things are very uncertain we need to think differently, because what we project based on current momentum may be the least likely outcome. We need to start thinking about the unthinkable scenarios -- and what's new today is people are finally figuring out how to do it well, in an environment with a huge amount of uncertainty."

Derrick Philippe Gosselin, who until recently was group senior vice president at French energy concern GDF Suez, offers a practitioner's perspective. Gosselin was responsible for introducing scenario thinking into GDF Suez's planning and investment processes, where the focus was on gaining strategic flexibility. "As someone thinking about scenarios, my job was to develop the capability in our company to anticipate things -- to make sense of the environment before other companies," he notes. This is particularly important in capital intensive industries such as the ones in which Suez operates. "Once you are invested [in a massive project], you are locked in for years, and many of your strategic options are no longer valuable. So the traditional way of thinking about strategy also is no longer as valuable." In other words, it is nice to have strategic options, but they have no real value if a company will never be able to execute them.

The exception to this rule occurs when a company can sense changes before its competitors do. For instance, when a market shoots dramatically up or plummets, it is already too late to get in or out of an investment profitably. However, some companies, according to Schoemaker, Day and other experts, have developed a competitive advantage by leveraging scenario planning -- first in stimulating discussion about potential outcomes arising from the swirling mix of trends shaping the world, and then in establishing monitoring mechanisms to identify which scenario is starting to unfold. In the end, the major objectives for these companies are to minimize surprises and to consistently anticipate -- and act on -- major emerging opportunities and challenges, ahead of competitors.

Gosselin, who is now a member of the Strategic Foresight Council at the World Economic Forum, believes that if he can get a company to start thinking about possible scenarios that could arise in the future, it means that "I create an awareness of these options, and each time they make an investment decision, they are aware of what could happen. It creates an early warning system, which is something I cannot get at all if we are all simply working with macroeconomic models. It also means we can operate extremely quickly. We have looked at the environment and potential developments, and now we can have a dialog on risk management, anticipation and investment options based upon that."

Thinking Differently

For many companies, the idea of scenario planning is not necessarily new, but often it is not practiced in a consistent or meaningful way. Most tend to follow key trends opportunistically and in relatively unstructured ways. Part of the challenge, experts say, is that the way organizations discuss and plan for the future is deeply rooted in the company's culture. This means it can take a great deal of time -- or an extraordinary shock -- to spark a change in approach. For instance, until recently, managers making a strategic recommendation to the CEO or board of directors often were expected to start by presenting a compelling opinion on what the future would be, and then offer a logical strategy or plan that, naturally, would emerge from that view of the future. Today, this kind of "linear" approach is increasingly being called into question.

At the same time, experts say, as planning discussions get closer to the top levels in a company, short-term financial concerns often rule the day. If there isn't strong backing by the CEO or other senior leaders to consider alternative views, then strategic planning discussions frequently default into financial exercises -- and scenarios tend to get mixed with financial sensitivity analysis.

Wharton's Day says the solution is to involve senior management directly and actively in open, long-term oriented discussions. Consultants or teams in the organization can help, he notes, but the heavy lifting intellectually has to be done by the top management team. Indeed, at GE, he says, every one of the top management teams is required to go through a scenario exercise. "The leaders of an organization need to share mental models, challenge assumptions and basically learn from each other. Scenarios force

managers to embrace uncertainty, and then figure out how to profit from it regardless of what happens. But first you have to get people out of their box. If they haven't participated in it, it is almost certain to fail. What you are doing is challenging assumptions that may have been tacit for years."

Kristel Van der Elst, who heads the scenario planning team at the World Economic Forum, has helped direct more than a half-dozen different exercises and seen the impact on participants' thinking. She emphasizes that it is crucial to have the right mix of people in the discussion. "It's important that you have different viewpoints," she says. "If you have people only from the same company, or even only from the business world, you may not get people who will challenge assumptions -- people who will shake up the discussions and thinking a little bit." In addition, opening up the discussion can also help create new networks and partnerships, to discuss trends in a non-threatening manner and foster a sense of trust. "We have had people in workshops who would not talk openly to one another in the normal course of business, but the scenario process provides them with a safe environment to share views, creating mutual understanding, trust and respect."

Ultimately, Van der Elst adds, such discussions help create a dialog that enriches the capabilities of everyone involved. "You end up changing how people think," she says. "The long-term benefit is that you open up people's minds, which also is why it is so important that you have decision makers directly involved in the process. Of course, this is a challenge, because it requires a big time commitment, but when they are only involved at the end of the process, with a presentation being delivered to them, they will have their own picture of the future in mind and are likely to reject the alternatives. It is only by taking them through the process that you can open up their thinking."

Day agrees. "An interesting question is whether we should call this scenario planning, or what I prefer, which is 'scenario learning.' Learning implies an intense discussion that challenges the tacit assumptions and mental models of each member of the management team. This provokes tension that leads to reflection, which is essential to collective learning. Learning also implies an on-going process in which the results of actions taken leads to further reflection and insight."

Developing New Scenarios

Even with senior-level participation, however, the key question is how to proceed most effectively. Experts say many companies and organizations are now focused on building a more systematic process to identify and track emerging trends, feeding into discussions about the implications. Without it, the amount of potentially important information becomes overwhelming -- impossible to assimilate or process well by using an opportunistic or essentially ad hoc approach.

Based on her experience at the World Economic Forum, Van der Elst offers some general guidelines on developing a scenario process within an organization. The first step, she says, is the identification of the "central question" -- that is, the specific strategic issue that requires a decision in light of trends or potential developments. Making sure this central question is relevant for the stakeholders is essential for the exercise to be useful. It can be defined through research and discussion in the scenario team, but most importantly through interviews with the stakeholders.

Once the key question has been identified, the next step is the identification of the driving forces and systemic changes that are underway -- the forces that will dramatically transform the playing field. Usually these are found in a variety of domains. A typical categorization used is STEEP: Social, Technological, Economic, Environmental, and (geo)Political. "It is important here to keep in mind you are thinking about the contextual environment in which you operate, not the transactional environment," Van der Elst says. "You look at forces beyond your control and influence that will impact you, as well as the industry you are in. You have to think broadly." These drivers are found in expert interviews and research, but most importantly through brainstorming with, again, a diverse, multidisciplinary group of people.

In doing so, according to Van der Elst, looking long-term is important: Engaging in a discussion about what the major drivers will be 10 or 20 years out can help people see things that they would never consider when looking only three or five years ahead. "The time horizon for the scenarios needs to be sufficiently long to avoid only conveying a creative description of the present, and sufficiently short for the scenarios not to lose focus and relevance." In addition, participants should not be looking only at

things that are direct extensions of what is already happening, but instead at things that could happen. For instance, when the price of oil is soaring, thinking about a scenario of much lower prices is important because it is plausible, even if it is not an extrapolation of current trends. It is not being 'realistic' that matters; it is being plausible.

Out of the long list of potential drivers, companies can move on to determine the critical uncertainties. Simply put, these are the driving forces that are both extremely important and highly uncertain. "These are the things you need to think about and be prepared for," Van der Elst says. "For these critical uncertainties, you explore relevant, challenging, diverse, and possible outcomes." An effective mechanism to do this often is a workshop where the primary forces of changes are discussed and prioritized, with the results plotted on a 2x2 chart, usually with impact on one axis and certainty on the other. This helps management teams focus on what is important, and avoid what is just noise. It also begins to uncover implicit assumptions and beliefs -- for instance, a lot of people think some things are certain, when it turns out they are not certain at all.

The biggest-impact uncertainties will be the key themes for the scenarios. "This is something we cluster," Van der Elst says. "During workshops, we explore different sets of drivers to find the scenarios that are most relevant. This depends on the audience. We always ask: What are the boundaries of possibilities? How would the world look like in this scenario and what does it mean to you?" The scenarios are often brought to life and communicated using story-telling techniques, which are effective ways to help decision makers understand the potential outcomes, easily remember them and challenge the current accepted wisdom.

As an example of the output from a robust scenario exercise, consider a recent [paper](#) by Schoemaker and co-author Rob-Jan de Jong from Europe. They offer four scenarios -- titled Capitalism 2.0, Global Depression, Visible Hand and Obama World -- that depict how Western economies might emerge from the global financial crisis that became visible in 2008. Looking ahead to the year 2012, these scenarios describe different futures that could define the next five years, including early warning signs. The scenarios are built around two pivotal uncertainties. The first concerns the deeper nature of the present downturn (i.e., will it prove to be cyclical as before, or deeply systemic and dislocating?) The second uncertainty concerns the role of government versus the free market in lifting economies out of the current malaise.

The final step is for participants and others to take the input back into their strategy decision-making process. In general, there are two different approaches, the experts say. One is to attempt to make a company's whole strategy completely robust against every scenario. This, however, can be difficult or even water down the strategy. A better option, the experts say, is to design a strategy that creates value in two or three scenarios -- with a backup plan if other scenarios emerge.

Hidden in Plain Sight

Indeed, being prepared may be the single biggest benefit of scenario thinking. Otherwise, managers run the risk of engaging in overly linear thinking. This, in today's environment, can be devastating. As recent events have clearly shown, companies' positions in the future are not definitively linked to where they are today. Instead, more and more managers are being forced to think about alternatives.

Van der Elst sees this change already happening. "Companies had to get away from making decisions or arguments about what the future should be," she says. "One of the challenges we had until recently in the [World Economic Forum] workshops was to make the people in the room realize that there could be a slowdown in economic growth. They would say that is not possible, so each time we had to make sure people understood that the downside also was an option. As the participants went through the process, it opened their minds. Some CEOs told us afterward that they returned to work and changed their strategy. They had been completely banking on the high-growth option."

Gosselin voices a similar perspective. "The discussion of going from point A to point B is not the right one," he says. With more and more companies operating in turbulent environments, "you must be open to considering alternatives, and possibly an alternative that you do not agree with. When something shocking happens, afterward it always seems so obvious. People ask, 'Why did we not see it? Well, the answer is because there were lots of options for possible outcomes. But now, afterward, there is only one that we

see."

This is a single/personal use copy of Knowledge@Wharton. For multiple copies, custom reprints, e-prints, posters or plaques, please contact PARS International: reprints@parsintl.com P. (212) 221-9595 x407.